

prohibition of dubbing data to memory card 1 can be set in detail for each type of recording medium. To be more specific, for example, dubbing of data from a CD-DA or a DVD-ROM to memory card 1 is permitted but dubbing of data from an MD-DA to memory card 1 is not.

As is obvious from the above description, in an operation to record information played back from a first recording medium into a second recording in accordance with the present invention, control is executed to permit or prohibit the operation to record (dub or copy) the information into the second recording medium on the basis of a judgment as to whether the first recording medium is a recording medium with a dubbing operation permitted or prohibited. Thus, the control can be executed to permit or prohibit the operation to copy the information in accordance with the type of the first recording medium, exhibiting an effect of implementability of proper copy management according to types of a variety of recording media, a variety of applications and a variety of data formats.

In addition, according to the illustrative embodiment, the formation of the judgment as to whether the first recording medium is a recording medium with a dubbing operation permitted or prohibited is based on information conveyed by a beam reflected from the first recording medium or predetermined identification information recorded on the first recording medium. As a result, the illustrative embodiment is advantageous in that there is no need to provide a special circuit for forming the judgment.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, because certain changes may be made in carrying out the above method and in the construction(s) set forth without departing from the spirit and scope of the invention, it is intended that all matter contained in the above description and shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therein.

What is claimed is:

1. A recording apparatus, comprising:

recording means for recording information played back from a first recording medium into a second recording medium, said recording means comprising a first security block having an encryption circuit and an authentication processing circuit, said first recording medium comprising a second security block;

judgment means for forming a judgment as to whether said first recording medium is allowed to be dubbed or prohibited from being dubbed;

random-number generation circuit means for generating a session key to be shared with said second security block if said judgement formed from said judging means indicates that said first recording medium is allowed to be dubbed; and

control means for inhibiting said recording means from recording information played back from said first recording medium into said second recording medium when said judgment formed by said judgment means indicates that said first recording medium is prohibited from being dubbed;

wherein said first security block sends first authentication data to said second security block which generates

second authentication data and adds this second authentication data to the first authentication data and sends both authentication data to said recording means to form said judgment.

2. The recording apparatus according to claim 1, wherein said first recording medium includes a disc shape.

3. The recording apparatus according to claim 2, wherein said judgment means forms said judgement based on information conveyed by a beam reflected from said first recording medium.

4. The recording apparatus according to claim 2, wherein said judgment means forms said judgement based on predetermined identification information recorded on said first recording medium.

5. The recording apparatus according to claim 1, wherein said second recording medium is a non-volatile memory.

6. The recording apparatus according to claim 1, wherein said judgment means forms said judgement based on a type of said first recording medium.

7. The recording apparatus according to claim 6, wherein said first recording medium is one of a playback type medium that is allowed to be dubbed and a recordable type medium that is prohibited from being dubbed.

8. The recording apparatus according to claim 6, wherein said first recording medium is one of a playback type medium, with all information being recorded therein using emboss pits, that is allowed to be dubbed and a medium of a type other than said playback type that is prohibited from being dubbed.

9. The recording apparatus according to claim 6, wherein said first recording medium is one of a playback type medium, with all information representing management information and audio data being recorded therein using emboss pits, that is allowed to be dubbed and a medium of a type other than said playback type that is prohibited from being dubbed.

10. A recording and playback apparatus, comprising:

playback means for playing back information from a first recording medium;

recording means for recording information played back from said first recording medium into a second recording medium, said recording means comprising a first security block having an encryption circuit and an authentication processing circuit, said first recording medium comprising a second security block;

judgment means for forming a judgment as to whether said first recording medium is allowed to be dubbed or prohibited from being dubbed;

random-number generation circuit means for generating a session key to be shared with said second security block if said judgement formed from said judging means indicates that said first recording medium is allowed to be dubbed; and

control means for inhibiting said recording means from recording information played back from said first recording medium into said second recording medium when said judgment formed by said judgment means indicates that said first recording medium is prohibited from being dubbed

wherein said first security block sends first authentication data to said second security block which generates second authentication data and adds this second authentication data to the first authentication data and sends both authentication data to said recording means to form said judgment.

11. The recording and playback apparatus according to claim 10, wherein said first recording medium includes a disc shape.

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12. The recording and playback apparatus according to claim 11, wherein said judgment means forms said judgment based on information conveyed by a beam reflected from said first recording medium.

13. The recording and playback apparatus according to claim 11, wherein said judgment means forms said judgment based on predetermined identification information recorded on said first recording medium.

14. The recording and playback apparatus according to claim 10, wherein said second recording medium is a non-volatile memory.

15. The recording and playback apparatus according to claim 10, wherein said judgment means forms said judgment based on a type of said first recording medium.

16. The recording and playback apparatus according to claim 15, wherein said first recording medium is one of a playback type medium that is allowed to be dubbed and a recordable type medium that is prohibited from being dubbed.

17. The recording and playback apparatus according to claim 15, wherein said first recording medium is one of a playback type medium, with all information being recorded therein using emboss pits, that is allowed to be dubbed and a medium of a type other than said playback type that is prohibited from being dubbed.

18. The recording and playback apparatus according to claim 15, wherein said first recording medium is one of a playback type medium, with all information representing management information and audio data being recorded therein using emboss pits, that is allowed to be dubbed and a medium of a type other than said playback type that is prohibited from being dubbed.

19. A recording method, comprising the steps of:

recording information played back from a first recording medium into a second recording medium comprising a first security block having an encryption circuit and an authentication processing circuit; said first recording medium comprising a second security block;

forming a judgment as to whether a first recording medium is allowed to be dubbed or prohibited from being dubbed;

generating a session key to be shared with said second security block if said judgement formed indicates that said first recording medium is allowed to be dubbed;

recording information played back from said first recording medium into a second recording medium when said

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judgment formed at said judgment step indicates that said first recording medium is allowed to be dubbed; and

inhibiting an operation to record information played back from said first recording medium into said second recording medium when said judgment formed at said judgment step indicates that said first recording medium is prohibited from being dubbed;

wherein said first security block sends first authentication data to said second security block which generates second authentication data and adds this second authentication data to the first authentication data and sends both authentication data back to the first security block to form said judgment.

20. The recording method according to claim 19, wherein said first recording medium includes a disc shape.

21. The recording method according to claim 20, wherein said judgment is formed based on information conveyed by a beam reflected from said first recording medium.

22. The recording method according to claim 20, wherein said judgment is formed based on predetermined identification information recorded on said first recording medium.

23. The recording method according to claim 19, wherein said second recording medium is a non-volatile memory.

24. The recording method according to claim 19, wherein said judgment is formed based on a type of said first recording medium.

25. The recording method according to claim 24, wherein said first recording medium is one of a playback type medium that is allowed to be dubbed and a recordable type medium that is prohibited from being dubbed.

26. The recording method according to claim 24, wherein said first recording medium is one of a playback type medium, with all information being recorded therein using emboss pits, that is allowed to be dubbed and a medium of a type other than said playback type that is prohibited from being dubbed.

27. The recording method according to claim 24, wherein said first recording medium is one of a playback type medium, with all information representing management information and audio data being recorded therein using emboss pits, that is allowed to be dubbed and a medium of a type other than said playback type that is prohibited from being dubbed.

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28. (New) A recording apparatus, comprising:
converging means for converging a light beam on an optical disc;
detecting means for detecting a reflected light beam reflected by said optical disc;
reproducing means for reproducing information recorded on said optical disc based on
said reflected light beam detected by said detecting means;
recording means for recording information reproduced by said reproducing means in a
storage medium;
determining means for determining a type of said optical disc based on in-focus timing
and count while said converging means is moved in a focus direction for said optical disc, said
in-focus timing and count being detected according to said reflected light beam detected by said
detecting means; and
control means for inhibiting said recording means from recording information reproduced
from said optical disc in said storage medium according to the determination result.

29. (New) The recording apparatus according to claim 28, wherein said determining
means determines whether said optical disc has a single layer structure or a multi layer structure.

30. (New) The recording apparatus according to claim 29, wherein when said
determining means determines said optical disc has a single layer structure, said determining
means determines a type of said optical disc based on a reflectivity of said optical disc.

31. (New) The recording apparatus according to claim 28, wherein said determining
means determines whether said optical disc is a playback type medium or a recordable type
medium.

32. (New) The recording apparatus of claim 28, wherein said converging means
converges said light beam within a range of possible focus lengths.

33. (New) The recording apparatus of claim 28, wherein said in-focus timing is a time required for said converging means to properly focus said light beam on said optical disc.

34. (New) A recording method, comprising the steps of:
converging a light beam on an optical disc;
detecting a reflected light beam reflected by said optical disc;
reproducing information recorded on said optical disc based on said reflected light beam;
recording said reproduced information in a storage medium;
determining a type of said optical disc based on in-focus timing and count while said light beam is moved in a focus direction for said optical disc, said in-focus timing and count being detected according to said reflected light beam; and
inhibiting the recording of information reproduced from said optical disc in said storage medium according to the determination result.

35. (New) The recording method according to claim 34, wherein it is determined whether said optical disc has a single layer structure or a multi layer structure.

36. (New) The recording method according to claim 35, wherein when it is determined that said optical disc has a single layer structure, a type of said optical disc is determined based on a reflectivity of said optical disc.

37. (New) The recording method according to claim 34, wherein it is determined whether said optical disc is a playback type medium or a recordable type medium.

38. (New) The recording method of claim 34, wherein said light beam converges within a range of possible focus lengths.

39. (New) The recording method of claim 34, wherein said in-focus timing is a time required to properly focus said light beam on said optical disc.